

### **REMARKS**

Reconsideration of the present application is requested in view of the foregoing claim amendments and the following remarks.

#### **I. Correction of Priority Claim and Amendments to the Specification**

The present application is the U.S. National Stage of International Application PCT/AU03/01383. As indicated in the enclosed form IB318 (Exhibit A) issued on December 22, 2003, the International Bureau of WIPO corrected the priority claim in International Application PCT/AU03/01383 to read as follows:

AU 17 October 2002 (17.10.02) 2002952139

(See enclosed form IB318). Accordingly, the priority claim in the present application has been corrected to reference Australian Application AU 2002952139, filed on October 17, 2002. The Applicants are endeavoring to obtain a certified copy of Australian Application AU 2002952139, filed on October 17, 2002 in order to perfect the priority claim in the present application.

#### **II. Claim Amendments**

Prior to entering the foregoing claim amendments, claims 1-4, 6-9, 11-31, 33-47, and 49-52 were pending in the application. Claims 1 and 28 currently are amended to recite that the fluxing oxides are “selected from the group consisting of lithium oxide, potassium oxide, sodium oxide, vanadium oxide, phosphorous oxides and boron oxide.” Support for these claim amendments is provided in the original specification, for example, at page 17, lines 25-26.

Claims 11, 49, and 50 currently are amended further to the amendments to claims 1 and 28. Claims 20, 37, 38, and 44 are requested to be cancelled without disclaimer or prejudice to further prosecution on the merits.

Because the claim amendments do not introduce new matter and otherwise are proper, entry thereof is requested. After entering the foregoing claim amendments, claims 1-4, 6-9, 11-19, 21-31, 33-36, 39-43, 45-47, and 49-52 are pending in the application. Claim 51 currently is withdrawn from examination.

### **III. Claim Rejections §102(b) and/or §103(a) over Dickinson and Romenesko**

The Examiner rejects claims 1-4, 6-9, 11-31, 33-47, 49, 50, and 52 under 35 U.S.C. § 102 (b) as anticipated by, or in the alternative under 35 U.S.C. § 103 (a) as obvious over Dickinson, EP 0559382 A1 (hereinafter “Dickinson”), either alone or further in view of Romenesko, U.S. Patent No. 6,433,049 (hereinafter “Romenesko”). The Applicants respectfully traverse the rejections in view of the foregoing claim amendments and the following remarks.

#### **A. Patentability of Claims 1-4, 6-9, 11-31, 33-47, 49, 50, and 52 over Dickinson**

Dickinson describes a fire retardant communications cable comprising a fire retardant material composed of (a) polymeric base material, (b) an additive system; and (c) inorganic oxide constituents. In particular, Dickinson discloses a fire retardant communications cable comprising a fire retardant material composed of:

- about 10 to 50% by weight of a polymeric base material,
- about 5 to 60% of an additive system exclusive of inorganic oxide constituents, and
- about 5 to 40% of said inorganic oxide constituents.

(*See* Dickinson at col. 8, lines 16-20). With respect to the additive system and in inorganic oxide constituents, Dickinson states:

The additive system includes at least a first inorganic oxide constituent having a relatively low melting point and a second inorganic oxide devitrifying constituent having a relatively high melting point. The low temperature melting first inorganic oxide constituent of the additive system begins to melt at a much lower temperature, i.e., about 350 ° C to 450 ° C, than typical glasses. See British patent GB 2220208. The inorganic oxide constituents may be referred to as frits. In a preferred embodiment, the composition of this invention includes an additive system which comprises a blend of vitreous and ceramic materials.

(See Dickinson, col. 5, lines 2-13).

As such, Dickinson's "additive system" requires a "first inorganic oxide constituent" and a "second inorganic oxide constituent." Dickinson refers to the first inorganic oxide as a frit having a melting point of at least 350°C, including **phosphate glasses** containing 50-75% P<sub>2</sub>O<sub>5</sub>. (See Dickinson col. 5, lines 30-31). Dickinson states that the second inorganic oxide constituent is a devitrifying frit that begins to crystallize at about 650°C, including **polycrystalline mullite fibre**. (See Dickinson col. 5, lines 56-57). In addition to said first and second inorganic constituents, the additive system also may include other constituents. (See Dickinson col. 5, line 58 to col. 6, line 21).

**Dickinson does not disclose that a fire retardant material comprising a metal oxide selected from an oxide of lithium, potassium, sodium, or vanadium.** Rather, the fire retardant material of Dickinson includes phosphate glasses containing 50-75% P<sub>2</sub>O<sub>5</sub>. During fire conditions, phosphate glasses are not able to bridge a highly coherent residue after organic components are burned off. As such, Dickinson's fire retardant material would crack and no longer offer protection around the conductor. This is contrary to the presently claimed compositions. (See Specification, page 4, line 28 to page 5, line 15) of the specification) In particular, Dickinson specifies that glasses include at least one oxide selected from alkali metal oxides **and at least one oxide selected from alkaline earth metal oxides and zinc oxide.** (See

Dickinson col. 5, lines 23-26). These required alkaline earth metal oxides and zinc oxide are too conductive and cause failure by reducing the resistivity of the insulation as the temperature is increased. This also is contrary to the presently claimed compositions. Thus, the material of Dickinson would lead to inferior electrical resistance at high temperatures so that cables made with such compositions would fail tests of fire resistance.

**Furthermore, Dickinson is silent about the fact that the fire retardant material includes silicate mineral filler in particulate form.** Rather, the fire retardant material of Dickinson includes polycrystalline mullite fibres. However, fibres in cable insulation cause defects in the insulation when it is extruded, so that the material of Dickinson does not have an excellent processability. This also is contrary to the presently claimed composition. (See Specification, page 4, lines 23-27). In addition, fibres should be avoided for reasons of health and safety, especially crystalline form fibres.

Therefore, the presently claimed combination of fluxing oxides and particulate silicate mineral filler is essential where the fluxide oxide binds the particles of silicate mineral filler to form a coherent ceramic residue at temperatures encountered under fire conditions. For these reasons, claims 1 and 28 and the dependent claims therefrom are patentable over Dickinson and the rejection should be reconsidered and withdrawn.

**B. Patentability of Claims 21-23, 25, 26, 46, and 52**

Claims 21-23, 25, 26, 46, and 52 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Dickinson in view of Romenesko. The Applicants respectfully traverse the rejection in view of the foregoing claim amendments and the following remarks.

For the same reasons laid out above, claims 21-23, 25, 26, 46, and 52 are patentable over Dickinson in view Romenesko. It would not have been obvious to one having skill in the art to modify Dickinson in light of Romenesko because Dickinson does not disclose the criticality of the nature of the components of the present claims, in particular the fluxide

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Amendment dated April 8, 2011  
Reply to Office Action dated December 8, 2010

oxide and silicate mineral filler in particular form, whose nature and proportion are critical to achieving dimensional stability and strength. Romenesko does not remedy the deficiencies of Dickinson with respect to teaching or suggesting the importance of fluxide oxide and silicate mineral filler in particular form and the criticality of the proportions of these components for minimizing shrinkage and maximizing flexural strength.

For these reasons, the rejections should be reconsidered and withdrawn.

**IV. Conclusion**

An effort has been made to place this application in condition for allowance and such action is earnestly requested. The Examiner is invited to contact the Applicants' representative if doing so will further prosecution of the application.

Respectfully submitted,

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## PATENT COOPERATION TREATY

## PCT

## NOTIFICATION RELATING TO PRIORITY CLAIM

(PCT Rules 26bis.1 and 26bis.2 and  
Administrative Instructions, Sections 402 and 409)

Date of mailing (day/month/year) 22 December 2003 (22.12.03)	From the INTERNATIONAL BUREAU
Applicant's or agent's file reference 80555842	To:
International application No. PCT/AU03/01383	FREEHILLS CARTER SMITH BEADLE Level 43 101 Collins Street Melbourne, Victoria 3000 Australia
Applicant POLYMERS AUSTRALIA PTY LIMITED et al	

The applicant is hereby notified of the following in respect of the priority claim(s) made in the international application.

- Correction of priority claim. In accordance with the applicant's notice received on: 28 November 2003 (28.11.03), the following priority claim has been corrected to read as follows:  
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  - even though the indication of the number of the earlier application is missing.
  - even though the following indication in the priority claim is not the same as the corresponding indication appearing in the priority document:
- Addition of priority claim. In accordance with the applicant's notice received on: , the following priority claim has been added:
  - even though the indication of the number of the earlier application is missing.
  - even though the following indication in the priority claim is not the same as the corresponding indication appearing in the priority document:
- As a result of the correction and/or addition of (a) priority claim(s) under items 1 and/or 2, the (earliest) priority date is:
- Priority claim considered not to have been made.
  - The applicant failed to respond to the invitation under Rule 26bis.2(a) (Form PCT/I/B/316) within the prescribed time limit.
  - The applicant's notice was received after the expiration of the prescribed time limit under Rule 26bis.1(a).
  - The applicant's notice failed to correct the priority claim so as to comply with the requirements of Rule 4.10.

The applicant may, before the technical preparations for International publication have been completed and subject to the payment of a fee, request the International Bureau to publish, together with the international application, information concerning the priority claim. See Rule 26bis.2(c) and the PCT Applicant's Guide, Volume I, Annex B2(B).
- In case where multiple priorities have been claimed, the above item(s) relate to the following priority claim(s):
- A copy of this notification has been sent to the receiving Office and
  - to the International Searching Authority (where the international search report has not yet been issued).
  - the designated Offices (which have already been notified of the receipt of the record copy).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 338.8740	Authorized officer S. Buttay Telephone No. (41-22) 338 9653
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